REMARKS

Claims 1-22 are pending in the application. Claims 1-5, 10 and 12-17 stand rejected under § 103(a) as unpatentable over Ralph '242 in view of Horst '847.

1. U.S. Patent No. 6,823,242 to Ralph.

Ralph is entitled "Method and Apparatus for Monitoring Wheel/Brake Performance." Ralph is characterized by the Examiner as disclosing:

> an automated voice transmission method to authorize the movement of trains in non-signal territory, automated voice transmission method comprising: generating a non-verbal movement authority for a designated train in non-signaled territory; and converting non-verbal movement authority to a verbal movement authority (see at least column 5, lines 58-67); and communicating verbal movement authority to designed train (see at least columns 11-12, lines 50-8).

The application specifically describes, and all of the claims recite, an automated voice transmission method, or system, to authorize the movement of trains in non-signaled territory.

Ralph does not describe or teach any such system or method as recited in claims 1 and 12. For example, claim 1 recites (emphasis added):

1. An automated voice transmission method **to authorize the movement of trains in non-signaled territory**, said automated voice transmission method comprising:
   a. **generating a non-verbal movement authority** for a designated train in said non-signaled territory;
   b. **converting said non-verbal movement authority to a verbal movement authority**;
   c. **communicating said verbal movement authority to said designated train**;
   d. receiving said verbal movement authority on-board said designated train; and
   e. communicating acceptance or rejection of said verbal movement authority from on-board said designated train.

The Examiners characterizes Ralph, per the quote above, as disclosing the first three limitations in claim 1. Respectfully, Applicant disagrees. Ralph does neither discloses nor

teaches these limitations. The portions of the description of Ralph cited by the Examiner do not support the quoted characterizations. For example, column 5, lines 58-67, reads as follows:

> Human speech engine 56, although shown separate from processor 52, may be included as a part thereof, or may be coupled to processor 52 as a separate unit. Human speech engine 56 is provided to convert messages generated by processor 52 into a human recognizable form for transmission, by way of transmitter 58 and antenna 60, to the crew of the passing (or just passed) train. Human speech engine 56, radio transmitter 58, and antenna 60 may all comprise conventional components known to those of ordinary skill in the art.

The other portion of Ralph cited by the Examiner, columns 11-12, lines 50-8, reads as follows:

> Module 100 is configured to perform various self-tests on apparatus 30 (shown in FIG. 2) and to record any errors. If the self-test indicates a functioning apparatus 30, and there were no exceptions noted in the alarm data generated from ratio engine 90, then module 100 passes a "no defect" request to the voice generation process, which may be the human speech engine 56 shown in FIG. 2. By way of radio transmitter 58 and antenna 60, such a message may be transmitted to the crew of a passing (or passed) train.
>
> Module 96, if there are exceptions noted in the alarm data generated by ratio engine 90, and the number of exceptions do not exceed a predetermined number, another message is generated and passed, again to the human speech engine 56, ratio transmitter 58, and antenna 60 to transmit such other message, including the exceptions, to the train. If any self-check functions failed, or if there are any excessive number of alarms generated by apparatus 30, a system malfunction message is produced and sent to human speech engine 36, radio transmitter 58, and antenna 60 for transmission of the same to the train. Control of the process is then passed to module 102.
>
> Module 102 is configured to perform a clean up procedure condition apparatus 30 to wait for the next train. Module 102 also receives and handles any requests for human input and output (i.e. reports). When the next train is detected, the processing described herein commences anew.

At most, the cited text, above, teaches voice synthesis, i.e., the conversion of non-verbal messages generated by the processor to a verbal format by the human speech engine 56, is known in the art. The present claims are not directed to voice synthesis in such a broad, general context. Moreover, there is no disclosure or teaching in Ralph to use this voice synthesis in the context of the invention, i.e., as one part of a system/method for generating automated movement authorities for a train, either generally or specifically for travel in non-signaled territories.

Instead, Ralph describes a sliding wheel detector apparatus for automatically detecting a sliding wheel condition on a passing train, which includes means for parsing the cars and segregating the same into brake valve groupings and means for determining the ratio between a wheel being evaluated and the rest of the wheels in the brake valve group.

Nothing described in Ralph even remotely relates to movement authorities in general, or specifically for trains traveling in non-signaled territories-- which is the subject of the present application, and which is particularly recited all of the claims.

As explained in the background of the application, "in non-signal territory, the authorization for the locomotive engineer to move the train along the track is via a verbal movement authority." As further explained, the conventional method for trains traveling in non-signaled territory is as follows: first a movement authority is generated by a train dispatcher at a central train dispatching office; then the movement authority is read to the locomotive engineer via a voice radio communication system; next the locomotive engineer writes the verbal movement authority on a prescribed form and then reads it back to the dispatcher for confirmation. Finally, after the dispatcher confirms that the locomotive engineer has read the verbal movement authority correctly, the verbal movement authority is considered to be "in effect."

Ralph contains no disclosure related to even the conventional method for authorizing the movement of trains non-signal territories. The portions of Ralph cited by the Examiner relate only to the voice synthesis of messages generated by a "processor 52" (which is the "brake performance monitor") for transmission to the crew of a passing train. The information thus transmitted is concerning the detection of a sliding wheel condition of the passing train. The information transmitted has nothing at all to do with train movement authorities. The voice synthesized messages concerning the potential sliding wheel condition of a passing railcar are not in any way related to a "movement authority."

In sum, Ralph does not disclose or teach converting a non-verbal movement authority to a verbal movement authority and transmitting that movement authority to a train traveling in non-signaled territory.

Independent claims 1 and 12, from which the other claims depend, each particularly recite an apparatus/method for specifically providing authorization of movement of trains in non-signaled territory utilizing the conversion of a non-verbal movement authority to a verbal movement authority and communicating the verbal movement authority to a designated train traveling in non-signaled territory.

Ralph does not disclose or teach any of these limitations. As will be discussed below, Horst is even less pertinent than Ralph, and also does not teach any of these limitations.

2. U.S. Patent No. 6,466,847 to Horst.

Horst is entitled "Remote Control System for a Locomotive Using Voice Commands." The Examiner describes Horst in the following context:

> Ralph does not disclose receiving verbal movement authority on-board designated train, and communicating acceptance or rejection of verbal movement authority. However, Horst discloses receiving verbal movement authority on-board designated train (see at least

columns 1-2, lines 56-37), and communicating acceptance or rejection of verbal movement authority from on-board designated train (see at least columns 3-4, lines 59-51).

Horst describes a remote control system including a lead controller and a follower controller, wherein the lead controller (which can be held by a human operator located a certain distance from an unmanned remote locomotive) issues commands over a wireless communication link to the follower controller which is mounted on board the remote controlled locomotive. In particular, the lead controller is responsive to voice commands uttered by the human operator.

Per the quote, Horst is characterized as disclosing the last two limitations in claim 1, i.e.:

d. receiving said verbal movement authority on-board said designated train; and
e. communicating acceptance or rejection of said verbal movement authority from on-board said designated train.

Respectfully, the device described in Horst does not even perform similar steps as recited in the last two paragraphs of claim 1 listed above.

Like Ralph, Horst does not describe or teach any type of control system relating to movement of authorities for trains traveling in either signaled or non-signaled territories.

Moreover, Horst describes a "lead controller" which accepts verbal commands from a human operator and converts the verbal commands into a nonverbal signal which, after verification by the human operator of the lead controller, is transmitted to a follower controller located on an unmanned remote controlled locomotive.

Furthermore, the operation of the device is distinct to that recited in the present claims. In Horst, a verbal command is first generated, which is then converted to a non-verbal command which is transmitted to a controller on the remote, unmanned locomotive. In contrast, the claims

recite generating a non-verbal command first, which is then converted to verbal, and the verbal command is transmitted to a manned locomotive.

Additionally, the operation of the device, as described in Horst, contradicts the Examiner's characterization of Horst as disclosing "communicating acceptance or rejection of verbal movement authority from on-board designated train."

Specifically, the non-verbal signal that is transmitted by the lead controller to the follower controller on the remotely controlled locomotive is neither accepted nor rejected by the follower controller on the remotely controlled locomotive.

Instead, as described in columns 3-4, lines 59-51 (cited above), the follower controller on the remote (unmanned) locomotive controls the remote locomotive responsive to signals from the lead controller. The follower controller does not, and cannot, reject or accept the command signals. And, there is also no person on board the remotely controlled locomotive to hear the commands in order to either accept or reject such commands.

In Horst, a text to speech converter 26 includes a "speech recognition engine" that attempts to match the spoken utterance to a vocabulary item in a speech recognition dictionary. The operator of the lead controller utters a verbal command. The lead controller can audibly play back to the operator the word(s) which most closely matches that which was spoken, and then awaits confirmation from the operator as to whether the command was correctly interpreted. If the operator of the lead controller confirms that the command was correctly interpreted, the lead controller converts the verbal command to a non-verbal signal which is then transmitted to the remotely controlled locomotive. When the non-verbal signal is received, it is immediately implemented. The non-verbal signal is not converted to a verbal format, since there is no person

on the remote locomotive to hear it, and follower controller does not include any capability to either accept or reject the non-verbal command signal.

3. U.S. Patents to Hayashi and Polivka

Various dependent claims are reject as obvious over Ralph in view of Horst, and further in view of Hayashi and/or Polivka.

Hayashi describes only a system that automatically announces the arrival of a train via audio power amplifiers and speakers located at the station platform. And Polivka describes only a dispatch office traffic planning system that orchestrate train movements by transmitting digital messages directly to the on-board locomotive computer.

Like Ralph and Horst, Hayashi and Polivka do not disclose or teach any of the limitations of claims 1 and 12 as discussed above.

Additionally, all of the claims rejected further in view of Hayashi and/or Polivka depend from claims 1 and 12, and are thus patentable if claims 1 and 12 patentable.

CONCLUSIONS

Independent claims 1 and 12, from which all other claims depend, recite an automated voice transmission method/system to authorize the movement of trains in non-signaled territory, wherein the method/system provides for (1) generating a non-verbal movement authority for a designated train in non-signaled territory; (2) converting the non-verbal movement authority to a verbal movement authority; (3) communicating the verbal movement authority to the designated train; (4) receiving the verbal movement authority on-board the designated train; and (5) communicating acceptance or rejection of the verbal movement authority from on-board the designated train.

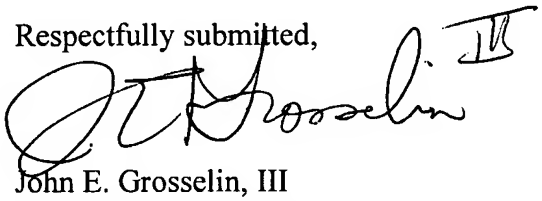
For the reasons explained in detail hereinabove, Ralph and Horst, either alone or any combination thereof, do not disclose or teach an automated voice transmission method/system to authorize the movement of trains in non-signaled territory as recited in claims 1 and 12.

Hayashi and Polivka, either alone or any combination thereof, including with Ralph and/or Horst, also do not disclose or teach these limitations.

Accordingly, claims 1-22 are believed to be patentable over Ralph, Horst, Hayashi, and Polivka, either individually or any combination thereof.

Therefore, reconsideration and allowance of claims 1-22 are respectfully requested.

Respectfully submitted,



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